

filing of the present response to the Final Office Action. Applicants believe that a better mutual understanding of the issues was obtained and Applicants' position on the clear differences between the disclosed and claimed invention explained.

Initially, the focus of the interview was on the type of game to which the present invention is directed. In the preferred embodiment, the game is a dance game in which a player listens to an entire music piece and either performs dance steps in accordance with visual commands on a display screen or operates a controller, all in coordination with original (usually popular high tempo) music pieces. The accuracy of the player's steps or controller operations are determined by sensors on a floor space that connect to a processor, or by the processor connected to the controller. These are highly intense games requiring a great deal of skill, stamina and physical activity. Preferably, the music played involves currently popular songs and a single game session may involve the play of several different songs, as this is more attractive to participants. Thus, each of the songs or "original music" has a main portion that the participant knows and enjoys. The problem solved by the present invention is outlined at pages 2 and 3 of the application, namely, the transition from one type of original music to another type of original music (variation in tempo, theme, instrumentation or the like). The goal is to keep the player excited during a single session as the songs transition from one original piece to another original piece. Other types of games may have similar problems.

In particular, as is clear from the illustration in Fig. 5 of the present application, there are separate and distinct original music pieces and separate and distinct connection music pieces. The connection pieces are created to match in tempo, instrumentation and the like, at their beginning and end, the end and beginning of the original pieces, respectively. These pieces exist as separate pieces, as is clear from the illustration of the memory content in Fig. 4, where original and connection pieces occupy different areas of memory. The description of the stored

data beginning at page 20 and the timing data description thereafter clearly teaches the separate and distinct character of the original pieces, their content (at least main, with preamble and/or post-amble) and the separate and distinct character of the intermediate pieces (e.g., as at page 23).

Contrary to one statement in the summary of the interview, however, the preamble, main portion and post amble are not separate and distinct pieces, but as disclosed and claimed, form part of a single original piece. It is the original pieces and the intermediate pieces that are separate and distinct, and are separately stored and output. The timing that defines the post-amble and the preamble of any given original piece, and the timing that defines the beginning and end of an intermediate piece, are important to the creation of a smooth and continuous flow of music from plural music pieces, despite their existence as separately stored data in memory.

Finally, Applicant wishes to note that, during the interview, the Examiner indicated that he will search movies with respect to the transitioning of two separate music pieces. However, in anticipation of any further art being cited by the Examiner, Applicants wish to note that in movies and in games, where there are two or more songs being played in sequence, there is a significant differences. One difference is that the two songs will be recorded on the same track and have a transition preprogrammed into the track. There is no separate storage and separate readout of the songs and an intermediate piece. Another difference, where there are separately stored music pieces is that there is a hiatus between the first song and the second song, while the second song is retrieved from memory. This is true in games as well, where different levels may have different music, but when a level ends, the music ends. In any event, there is no smooth and programmed transition as disclosed and claimed, based on timing information related to each piece..

Claim Rejections - 35 U.S.C. § 102

Claims 1-3, 7-12, 14-23, 25-32 are rejected under 35 U.S.C. § 102(e) as being anticipated by Araki et al. This rejection is traversed.

In framing the rejection, the Examiner asserts that Araki discloses a game machine with a first original music output means for outputting during automatic play at least a “main part” of a first original music, with reference to Fig. 7 and, in particular, the first-fourth channel from t0-t1 when drum, base, synthesizer and melody main music is played. The Examiner also asserts that there is a post-amble subsequent to the “main part,” with reference to Fig. 7 and the illustration of first-fourth channels “from t1 to when the background - sound data of each channel = zero.” This appears to be during the period t1-t2.

The Examiner also finds a second original music output means for outputting during automated game play at least a main part of a second original music containing a preamble, with reference to Fig. 7 and the fifth-sixth channel from t1-t3. The Examiner considers the main part subsequent thereto to be represented by the fifth-sixth channel from t3 beyond, as illustrated in Fig. 7.

Finally, the Examiner looks to Figs. 5-7 for a “connection music output means” for outputting during automated play a predetermined “connection music,” with reference to the first-sixth channels from t1-t3.

The Examiner asserts that there is timing provided in Araki et al such that the main part and timing of the original music coincides with start timing of the “connection music” and the main part of the start timing of the second original music coincides with the output in timing of the connection music, with reference to Fig. 5.

The Examiner's analysis reveals a fundamental flaw in the rejection. Applicants respectfully submit that (1) the Examiner is ignoring clear limitations in the claims and (2) the Examiner is utilizing the same structure or function in the Araki et al reference for different and distinct claim limitations, especially with respect to the use of portions of the Examiner's original pieces (preamble or post-amble) as the separately defined and claimed "connection music". The claims have structure, in the nature of storage means and output means that separately store and process these separate and distinct types of music. The prior art simply does not have such separate structures or functions, as claimed. In the absence of such structures and functions, there cannot be any anticipation.

According to the invention, as illustrated in Fig. 5 of the present application and explained beginning at page 24, **original music pieces** MO1, MO2 and MO3 are sequentially selected for output. These are separate, distinct and complete **original music pieces**. Also, separate and distinct connection music MI2 and MI3 are available for a transition between **original music pieces** MO1, MO2, as well as MO2 and MO3, respectively. At an end timing TE during the play of the first **original music piece** MO1, separate and distinct connection music MI2, which corresponds with the second **original music piece** MO2, begins playing. As explained, the output volume of the first **original music piece** MO1 is set at zero and is halted upon the start of playing the **connection music** MI2. Clearly, this defines a **connection music** that is separate and distinct from the first **original music piece** MO1. Thereafter, at timing TP, while playing the **connection music** MI2, the correlated second **original music piece** MO2 begins playing. In this transition, again, the output volume of the **connection music** is maintained above zero, while that of the **original music piece** is set at zero until the main part start timing TS arrives. Then the output volume of the main part of the second **original music piece** MO2 is increased to a predetermined level. The play of the first **original music piece**

MO1 from time TE to the end is a “post amble” and the period from time TP to time TS is a “preamble” of the second **original music piece** MO2.

By contrast, in the Araki et al system, as illustrated in Fig. 7, there is no separate and distinct interim “connection music” that by definition in the claims is (1) “predetermined” and (2) **begins** with a post amble or the end timing of the first original music piece during automated play, and/or (3) **ends** with a preamble or start timing of a second original music. Alternatively expressed, the connection music is between the end timing of the main part of a first original piece and the start timing of a main part of a second original piece.

This concept simply does not appear in Araki et al. The Examiner’s reference to Fig. 5 is wholly inapplicable to the present invention as it is merely a sound-level control function, and has nothing to do with the switching between original music pieces and separate and distinct “connection music.” Accordingly, on the basis of the foregoing analysis, it is clear that the claims are not anticipated.

In particular:

- Independent claim 1 requires first and second original music and a separate connection music, where the end of a first original music coincides with the start of a separate connection music and the start of the second music coincides with the end of the connection music;
- Independent claim 7 requires a connection music to be output during a period when a post-amble of an original music is output, thereby requiring a separate and distinct connection music;

- Independent claim 8 requires a connection music to be output during a period when a preamble of an original music is output, thereby requiring a separate and distinct connection music;
- Independent claim 10 requires a separate storage means and output means for (1) original music having a main part and post-amble and (2) predetermined connection music, the latter for outputting the connection music upon arrival of the main part end timing;
- Independent claim 11 similarly requires a separate storage means and output means for (1) original music having a main part and post-amble and (2) predetermined connection music, the former for outputting original music upon occurrence of a start timing;
- Independent claims 14 and 16 require outputting both a connection music and a post-amble at the same time, clearly indicating a separate and distinct structure and processing;
- Independent claims 15 requires outputting a post-amble of a first original piece and a connection music, clearly indicating a separate and distinct structure and processing;
- Independent claim 17 requires outputting a preamble of a second original piece and a connection music, clearly indicating a separate and distinct structure and processing;
- Independent claims 18-22 and 25 are distinguishable at least for reasons given with respect to claim 1;
- Independent claim 26 is distinguishable at least for reasons given with respect to claim 7;
- Independent claim 27 is distinguishable at least for reasons given with respect to claim 8;
- Independent claim 28 is distinguishable at least for reasons given with respect to claim 10;
- Independent claim 29 is distinguishable at least for reasons given with respect to claim 11;

- Independent claim 30 is distinguishable at least for reasons given with respect to claim 16;
- Independent claim 31 is distinguishable at least for reasons given with respect to claim 17;
- Independent claim 3229 is distinguishable at least for reasons given with respect to claim 18;

Claim Rejections - 35 U.S.C. § 103

Claim 24 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Araki et al.

This rejection is traversed.

The fundamental differences between the claimed invention and Araki et al have been identified, most particularly, the concept of having a separate and distinct connection piece that is generated at a particular timing during a first original piece, and that ends at a particular timing during a second original piece. Nothing would lead one skilled in the art from the sound volume variations of Araki to the switching between first and second original pieces and separate and distinct connection pieces in the present invention. The concept of using a separate and distinct connection piece is simply not taught or suggested in Araki et al.

Claims 4-6 and 33-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Araki et al in view of Sone (5,919,047). This rejection is traversed.

Claims 4-6 and 33-35 depend from independent claim 1, directly or indirectly, and would be distinguishable over Araki et al for at least the reasons already given. Sone does not remedy the deficiencies of Araki et al, as there is no teaching or suggestion of the use of a separate and distinct intermediate music piece played between a first original piece and a second original piece, as set forth in claim 1.

Indeed, the Examiner cites Sone merely for its teaching of a cross fading for the volume and tempo of first and second pieces in order to demonstrate a smooth switching technique, with reference to Figs. 7B and the text at col. 9, lines 23-52. The deficiencies of Araki et al have already been identified. Nothing in Sone can remedy these deficiencies. Sone relates to a Karaoke machine and not a game machine, as claimed. The difference is significant, as the popular Karaoke machine stores thousands of pieces of music in a hard disk and plays back a desired one of those pieces of music selected by a user. The machine has a medley performance capability for playing sequentially and consecutively the most popular portions of a plurality of music pieces (sabi) without taking a break (col. 3, lines 39-51).

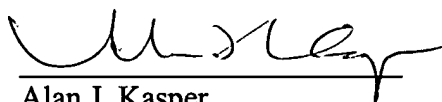
Sone merely concerns a Karaoke machine having a music selector. A connecting device operates when a performed medley switches from a preceding section of one music piece to a succeeding music piece. An example of a bridge section can be seen in Fig. 7C. However, this feature does not use the original music structure comprising a main piece with a preamble and/or post-amble, and a predetermined connection music, with timing for the connection music that depends on timing of the preamble and/or post-amble as claimed.

On the basis of the foregoing analysis, Applicants respectfully submit that the rejections should be overcome and the claims should be allowable.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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